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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,571	01/30/2004	Thomas R. Apel	008.P001	8895
Joseph Pugh 2300 NE Brookwood Parkway Hillsboro, OR 97124				
7590 08/07/2008				
EXAMINER				
WARREN, MATTHEW E				
ART UNIT		PAPER NUMBER		
2815				
MAIL DATE		DELIVERY MODE		
08/07/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/769,571

Applicant(s)

APEL ET AL.

Examiner

Matthew E. Warren

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the Amendment filed on April 15, 2008.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amended claims recite the limitation of an outer periphery of the emitter region occupies a perimeter of a base mesa region. This limitation is not supported by the specification and therefore will be ignored.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 5,266,819) in view of Chau et al. (US 5,512,496).

In re claim 1, Chang et al. shows (figs. 7 and 8) an alternate embodiment for an integrated circuit comprising: a bipolar junction transistor in which a base contact region (61") forms a fishbone configuration and an inner periphery of an emitter region (61') is adjacent to the periphery of the fishbone configuration (since the emitter itself is adjacent the fishbone). Chang shows all of the elements of the claims except the fishbone configuration having a spine and at least one finger that extends from one side and at least one finger that extends from a second side of the spine. Chau et al. shows (fig. 12A) a bipolar transistor having a base contact region (transmission line 1208) having a fishbone configuration wherein the spine of the fishbone has a base finger (1212) that extends from one side and at least one base finger (1212) that extends from a second side of the spine. With this configuration a high power multiple finger transistor is formed that eliminates the requirement for airbridges that add process difficulty and cost (col. 8, lines 1-12). Furthermore, the emitter (1206) has an inner periphery that is adjacent the fishbone configuration since the emitter is under the fishbone. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the base contact region of Chang by forming the base fingers on both sides of the spine as taught by Chau to form a high power transistor that eliminates the requirement for airbridges that add process difficulty and cost.

In re claim 2, Chang shows (figs. 8) that an emitter contact region (E) has an isomorphic shape with respect to the emitter region and is in direct physical contact with the top surface of the emitter region. The contact (E) has the same rectangular shape as the emitter region portion below it and is therefore isomorphic.

In re claims 3 and 4, Chang discloses (col. 4, lines 65-67) that the contact regions comprise conductive material such as metal.

In re claims 5, 6, and 12, Chang discloses (col. 5, lines 67) that the transistor comprises AlGaAs and GaAs and may be a heterojunction bipolar transistor.

In re claim 7, Chang shows (fig. 7) that the base region contacting tab is embedded within an extension (portion marked B) from a spine of the fishbone configuration.

In re claims 8-11, pertaining to the types of devices that the bipolar transistor is employed in, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ F. 2d 1647 (1987). Furthermore, amplifiers and cell phones are merely known devices which may employ a bipolar transistor. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bipolar transistor of Chang by using it in a power amplifier and/or cell phone to enable those devices to operate to increase the operating frequency.

In re claims 13 and 14, Chang does not specifically disclose the specific length or width of the extensions or the distance between the base and emitter regions. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the length or width of the fishbone extensions or the distance between the base and emitter regions of the desired parameters, since it has been held

that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

In re claims 15 and 16, Chau shows (fig. 12A) that the fishbone configuration includes at least six extensions connected to the spine.

Response to Arguments

Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection. See the 35 USC 112 Rejection above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Warren whose telephone number is (571) 272-1737. The examiner can normally be reached on Mon-Thur and alternating Fri 9:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew E Warren/
Primary Examiner, Art Unit 2815

August 4, 2008